



US Army Corps
of Engineers
Kansas City District

**KANSAS CITY DISTRICT
CORPS OF ENGINEERS
and
FOREST CITY LEVEE DISTRICT OF HOLT COUNTY, MISSOURI**

**Public Law 84-99 of the Flood Control Act of 1944
Levee Rehabilitation – NEPA Review, Environmental
Assessment & Finding of No Significant Impact**

**MISSOURI RIVER LEVEE SYSTEM UNIT
497, FEDERAL LEVEE REHABILITATION
PROJECT**

May 2008



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

Finding of No Significant Impact

Missouri River Levee System Unit 497, Forest City Levee District of Holt County, Missouri Levee Rehabilitation Project May 2008

Project Summary

The U.S. Army Corps of Engineers, Kansas City District (USACE), in cooperation with the project sponsor, Forest City Levee District of Holt County, Missouri, proposes to rehabilitate the Missouri River Levee System Unit No. 497-L under the authority of Public Law 84-99 of the Flood Control Act of 1944. The project area is located in Holt County, Missouri along the left descending bank of the Missouri River, between river miles 476 to 483, Right Descending bank of Mill Creek and the Left Descending bank of Kimsey Creek, near the town of Forest City, Missouri. During the May 2007 flood event, severe damages to the levee unit occurred. The damages consist of loss of vegetative cover on the riverward slope of the levee and erosion on the riverside ramps. The recommended plan would consist of seeding and mulching and repair of foreshore erosion on Mill Creek's right bank.

Alternatives

Alternative 1 (Recommended Plan). This alternative would consist of seeding the areas of the riverside slope and the immediate foreshore within the permanent right-of-way that were subject to grass kill as a result of the flood event; and placing quarry rock fill (981 tons) on Mill Creek's right bank. The repair actions for the lost of vegetative cover on the riverward slopes would consist of the placement of 11 acres of spray herbicide, fertilizer, grass seeds and mulch. Approximately 227 cubic yards of sediment would be removed from the right bank of Mill Creek and used as backfill. Rock fill would be deposited in/along a portion of the Creek, and go down to the flow line. In addition, some small trees (2 inch diameter) and brush located between the levee and the creek would be removed for placement of the rock fill.

No-Action Alternative- Under the no-action alternative, the USACE would not repair the damage to the levee caused by the May 2007 flood event.

Summary of Environmental Impacts

The proposed levee repair action would result in short-term, minor impacts to water quality and wildlife resources during construction activities. In addition, minor, long term impacts would result from the removal of a few small trees (2 inch diameter) and brush located between the levee and Mill Creek. Minor, long-term impacts to aquatic organisms would occur with the placement of rock fill in and along Mill Creek, which is an action covered under the General Permit No. 41. In addition, the environmental resources of the project area have been altered and disturbed by past actions; and the proposed levee repairs are a part of maintaining the pre-existing condition of the levee system after a flood event. Therefore, these impacts are not considered significantly adverse. Overall, these minor impacts are greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system.

Mitigation Measures

The recommended plan would not result in significant adverse impacts to mitigable resources as defined in USACE Planning regulations or under Section 404 of the Clean Water Act. Minor, long-term impacts would result from the placement of rock fill along/in Mill Creek, but this action is not considered significantly adverse to the aquatic ecosystem and is covered under the issued Regional General Permit No. 41 (Appendix II). In addition, minor, long term impacts would result from the removal of a few small trees (2 inch diameter) and brush located between the levee and Mill Creek. No alternative exist that would involve the removal of mast producing trees and/or impacting $\frac{1}{2}$ acre or more of trees averaging greater than 9 inches diameter at breast height (dbh). Therefore, no mitigation measures are warranted or proposed.

Public Availability

As part of the NEPA review for the proposed project, the USACE circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and the Draft Finding of No Significant Impact (FONSI), dated June 2, 2008, with a thirty-day comment period ending on July 2, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on the USACE Regulatory e-mail mailing list. The Notice informed these individuals that the EA and FONSI were available on the USACE webpage or that they could request the EA and FONSI in writing, in order to provide comment.

One comment was received from the U.S. Fish and Wildlife Service (USFWS) by letter dated June 16, 2008. The USFWS stated that the proposed activity is not likely to adversely affect federally listed species or designated critical habitat (Appendix II).

Conclusion

After evaluating the anticipated environmental, economic, and social effects of the proposed activity, it is my determination that construction of the proposed Missouri River Levee System Unit No. 497 Rehabilitation Project to restore vegetation and eroded levee ramps that occurred after the May 2007 flood event, does not constitute a major Federal action that would significantly affect the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

Date:

11 July 08



Roger A. Wilson, Jr.
Colonel, Corps of Engineers
District Commander



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896

EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers, Kansas City District (USACE), in cooperation with the project sponsor, Forest City Levee District of Holt County, Missouri, proposes to rehabilitate the Missouri River Levee System Unit No. 497-L under the authority of Public Law 84-99 of the Flood Control Act of 1944. The project area is located in Holt County, Missouri along the left descending bank of the Missouri River, between river miles 476 to 483, Right Descending bank of Mill Creek and the Left Descending bank of Kimsey Creek, near the town of Forest City, Missouri. During the May 2007 flood event, severe damages to the levee unit occurred. The damages consist of loss of vegetative cover on the riverward slope of the levee and erosion on the riverside ramps. The recommended plan would consist of seeding and mulching and repair of foreshore erosion on Mill Creek's right bank.

The proposed levee repair action would result in short-term, minor impacts to water quality and wildlife resources during construction activities. In addition, minor, long term impacts would result from the removal of a few small trees (2 inch diameter) and brush located between the levee and Mill Creek. Minor, long-term impacts to aquatic organisms would occur with the placement of quarry rock fill in and along Mill Creek, which is an action covered under the General Permit No. 41. In addition, the environmental resources of the project area have been altered and disturbed by past actions; and the proposed levee repairs are a part of maintaining the pre-existing condition of the levee system after a flood event. Therefore, these impacts are not considered significantly adverse. Overall, these minor impacts are greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system.

As part of the NEPA review for the proposed project, the USACE circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and the Draft Finding of No Significant Impact (FONSI), dated June 2, 2008, with a thirty-day comment period ending on July 2, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on the USACE Regulatory e-mail mailing list. The Notice informed these individuals that the EA and FONSI were available on the USACE webpage or that they could request the EA and FONSI in writing, in order to provide comment.

One comment was received from the U.S. Fish and Wildlife Service (USFWS) by letter dated June 16, 2008. The USFWS stated that the proposed activity is not likely to adversely affect federally listed species or designated critical habitat.

Additional information concerning this project may be obtained from Ms. Lekesha Reynolds, Environmental Resources Specialist, PM-PR, Kansas City District - U.S. Army Corps of Engineers, by writing the above address, or by telephone at 816-389-3160.

**NEPA REVIEW
ENVIRONMENTAL ASSESSMENT
&
FINDING OF NO SIGNIFICANT IMPACT**

**MISSOURI RIVER LEVEE SYSTEM UNIT NO. 497
LEVEE REHABILITATION PROJECT
HOLT COUNTY, MISSOURI**

TABLE OF CONTENTS

SECTION 1: INTRODUCTION

SECTION 2: AUTHORITY

SECTION 3: PROJECT LOCATION

SECTION 4: GENERAL DESCRIPTION

SECTION 5: PROJECT DAMAGES

SECTION 6: PURPOSE AND NEED FOR ACTION

SECTION 7: ALTERNATIVES

SECTION 8: NATIONAL ENVIRONMENTAL POLICY ACT REVIEW

SECTION 9: AFFECTED ENVIRONMENT

SECTION 10: ENVIRONMENTAL CONSEQUENCES

SECTION 11: CUMULATIVE IMPACTS

SECTION 12: MITIGATION MEASURES

SECTION 13: COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES

SECTION 14: CONCLUSION

SECTION 15: PREPARERS

TABLE 1- LOSS OF VEGETATIVE COVER ON THE RIVERWARD SLOPE

**TABLE 2 - COMPLIANCE OF RECOMMENDED PLAN WITH ENVIRONMENTAL
PROTECTION STATUTES AND OTHER ENVIRONMENTAL REQUIREMENTS**

APPENDICES

APPENDIX I - PROJECTS DRAWINGS

APPENDIX II- NEPA REVIEW

**NEPA REVIEW
ENVIRONMENTAL ASSESSMENT
&
FINDING OF NO SIGNIFICANT IMPACT**

**MISSOURI RIVER LEVEE SYSTEM UNIT NO. 497
LEVEE REHABILITATION PROJECT
HOLT COUNTY, MISSOURI
MAY 2008**

Section 1: INTRODUCTION

This Environmental Assessment provides information that was developed during the National Environmental Policy Act (NEPA) public interest review of the proposed Public Law 84-99 Missouri River Levee System Unit No. 497 Levee Rehabilitation Project.

Section 2: AUTHORITY

The Kansas City District – U.S. Army Corps of Engineers (USACE), in cooperation with the project sponsor, Forest City Levee District of Holt County, Missouri, proposes to construct the Missouri River Levee System Unit 497 Levee Rehabilitation Project under the authority of Flood Control Act of 1944, (Public Law 534, 78th Congress, 2d Session) for the Missouri River Basin and under the authority of Public Law 84-99 of the Flood Control Act of 1944.

Section 3: PROJECT LOCATION

The project area is located in Holt County, Missouri along the left bank of Missouri River, between river miles 476 to 483, right bank of Mill Creek and the left bank of Kimsey Creek.

Section 4: GENERAL DESCRIPTION

The Missouri River Levee Unit 497 is located near the town of Forest City in Holt County, Missouri. The approximately 68,561 linear feet of earthen FCW protects approximately 6,840 acres (of which approximately 6,820 acres are agricultural row crop land), 7 residences, 1 agricultural business, 1 waste water treatment plant, 1 large commercial grain storage facility, 43 grain storage silos and approximately 33 outbuildings. The levee also protects the main line of Chicago, Burlington, and Quincy Railroad, State Highway 111 and several miles of county roads. (See Appendix I, Attachment D-4)

Section 5: PROJECT DAMAGES

During the May 2007 flood event, severe damages to the levee unit occurred. The project damages consist of loss of vegetative cover on areas of the levee's riverside slopes and Mill Creek foreshore erosion towards the levee embankment between levee stations 598+00 and 602+00.

Table 1. Loss of Vegetative Cover on the Riverward Slope:

Sta. 265+80 thru Sta. 306+00	2 acres
Sta. 306+00 thru Sta 393+00	9 acres

Section 6: PURPOSE & NEED FOR ACTION

The project purpose and need is to rehabilitate the damaged levees and restore the associated social and economic benefits. Repair of the levee would restore an estimated level of protection in excess of 100 years.

Section 7: ALTERNATIVES

Alternative 1 (Recommended Plan). This alternative would consist of seeding the areas of the riverside slope and the immediate foreshore within the permanent right-of-way that were subject to grass kill as a result of the flood event; and placing 981 tons of rock fill on Mill Creek's right bank. The repair actions for the lost of vegetative cover on the riverward slopes would consist of the placement of 11 acres of spray herbicide, fertilizer, grass seeds and mulch. Approximately 227 cubic yards of sediment would be removed from the right bank of Mill Creek and used as backfill. Rock fill would be deposited along a portion of the Creek, and go down to the flow line. In addition, a few small trees (2 inch diameter) and brush located between the levee and the creek would be removed for placement of the rock fill.

No-Action Alternative- Under the no-action alternative, the USACE would not repair the damage to the levee caused by the May 2007 flood event.

Section 8: NATIONAL ENVIRONMENTAL POLICY ACT REVIEW

As part of the NEPA review for the proposed project, the USACE circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and the Draft Finding of No Significant Impact (FONSI), dated June 2, 2008, with a thirty-day comment period ending on July 2, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on the USACE Regulatory e-mail mailing list. The Notice informed these individuals that the EA and FONSI were available on the USACE webpage or that they could request the EA and FONSI in writing, in order to provide comment.

One comment was received from the U.S. Fish and Wildlife Service (USFWS) by letter dated June 16, 2008. The USFWS stated that the proposed activity is not likely to adversely affect federally listed species or designated critical habitat (Appendix II).

Section 9: AFFECTED ENVIRONMENT:

The project area is located in Holt County, Missouri along the left descending bank of Missouri River, between river miles 476 to 483, right descending bank of Mill Creek and the left descending bank of Kinsey Creek. The area behind the levee is mainly comprised of agricultural lands. Small pockets of riparian trees and vegetation are interspersed along the riverward extent of the levee, near the Missouri River and Creeks. Common trees found within this area include willows, cottonwoods and sycamores. In addition, various wildlife species occupy these pockets of riparian vegetation such as small fur-bearing species, white tail deer, and various birds, including neo-tropical migrants.

Primary resources of concern identified during the evaluation included: water quality, fish and wildlife, threatened and endangered species, riparian woodlands, wetlands, archeological and historical resources, flood control, and economics. Projects impacts to other resources were determined to be no effect.

Section 10: ENVIRONMENTAL CONSEQUENCES:

Water quality

With the implementation of the recommended plan, minor, temporary impacts to water quality such as increased turbidity are anticipated to occur with the placement of quarry rock fill below the ordinary high water mark of Mill Creek. In addition, there would be a potential for runoff from applied herbicides during seeding activities. Best management practices would be used to minimize the introduction of fuel, or petroleum products from entering the creek by storing construction equipment away from areas prone to runoff and requiring that all equipment be thoroughly cleaned and dried before being brought on and off site to minimize the spread of invasive species.

Under the No-Action Alternative, the damaged sod covers and eroded levees would not be repaired. Failure to repair the levees could result in minor, long term adverse impacts to water quality from increased erosion and runoff of pollutants from industrial sources, pesticides, petroleum products, and non-point sources of human and animal wastes.

Fish and Wildlife

With the implementation of the recommended plan, noise during seeding and construction activities may disturb wildlife in the area, in which wildlife such as small mammals, and birds would leave the project area and return once construction activities are completed. The placement of rock fill in Mill Creek would provide foraging areas for fish species.

Under the No-Action Alternative, there would be minimal impacts on fisheries and wildlife resources. These would primarily be related to flooding within the previously protected area.

Threatened or Endangered Species

The species listed as threatened or endangered within Holt County, Missouri include the Indiana bat (*Myotis sodalis*) (E), pallid sturgeon (*Scaphirhynchus albus*) (E), and the Western prairie fringed orchid (T) (*Plantantera praeciara*). The Bald eagle is no longer federally listed, but is still protected under the Bald and Golden Eagle Act and Migratory Bird Treaty Act.

The USACE has determined that no adverse effects on any federally-listed threatened or endangered species or their habitat would occur with the proposed levee repair work. The Pallid sturgeon (*Scaphirhynchus albus*) is found primarily in the Missouri River and Mississippi River. No work is proposed within the Missouri River. The Indiana bat (*Myotis sodalis*) roosts in exfoliating trees greater than 9 inches diameter breast height during the spring and summer, and hibernate in caves during the fall and winter. Levee work would not impact any Indiana bat habitat. The western prairie fringed orchid is not likely to be found in the project area. No impacts to any state listed endangered species or their habitat were identified.

Under the No-Action Alternative, there would be no impacts to endangered or threatened species since the project area does not contain habitat to support these listed species.

Riparian Woodlands/Vegetation

The recommended plan would restore the grassed-levee slopes that existed prior to the declared flood event of 2007. Minor, long term impacts would result from the removal of a few small trees (2 inch diameter) and brush located between the levee and Mill Creek.

The "No Action" Alternative could result in increases to the floodplain and to floodplain vegetation if lands are abandoned from farming due to the high risk of flooding. Overtime, successional vegetative growth could result in large expanses of floodplain forest.

Wetlands/ Aquatic Habitat

The recommended plan would have no adverse impacts on wetlands. However, the placement of quarry rock fill along/in Mill Creek is determined to be an action that is covered under the issued Regional General Permit No. 41 (Appendix II). This action would have some minor, long term impacts on benthos organisms within the footprint of the rock placement. However, the rock crevices would provide foraging and cover for small fish species.

The "No Action" Alternative could result in minor benefits to existing wetlands located on the flood plain within the protected area as these areas would be subject to a high level risk of future flooding.

Archeological and Historical Resources

A cultural resources review of the proposed levee repairs for the L-497 levee rehabilitation in Holt County, Missouri was conducted by the Kansas City District archeologist. No sites listed on or eligible for listing on the National Register of Historic Places are located within or near the proposed project area. Since all repair impacts would be limited to the existing levee facility, the

proposed project would have no potential to impact historic properties. Therefore, no coordination with the Missouri State Historic Preservation Office (SHPO) is required for the project. If project plans change and new right-of-way or borrow is required, then SHPO coordination would be required.

If in the unlikely event that archeological materials are discovered during project construction, work in the area of discovery would cease and the discovery investigated by a qualified archeologist. The findings on the discovery would be coordinated with the SHPO office and appropriate federally recognized Native American tribes.

The "No Action" Alternative would result in no effects to archaeological or historical resources.

Floodplain

The recommended plan would restore damaged sod cover and aggregate surfacing to the existing levee system. The proposed action would not directly or indirectly support more development in the floodplain or encourage additional occupancy and/or modification of the base floodplain. Furthermore, the Corps has determined that the recommended plan complies with the intent of Executive Order 11988.

The "No Action" Alternative would continue to expose all public and private infrastructure protected by the levee prior to the flood damage to a high level risk of future flooding.

Economics

The recommended plan would restore damaged sod cover and aggregate surfacing to the existing levee system. Public and private infrastructure protected by the levee prior to the flood damage would continue to be protected against a 100-year flood event. Economic conditions are unlikely to change from those of pre-damage levee conditions with the repair of this levee system.

The "No Action" Alternative has a zero benefit to cost ratio and would continue to expose all public and private infrastructure protected by the levee prior to the flood damage to a high level risk of future flooding. The area would continue to suffer the effects of a levee with a dramatically smaller level of protection and would be exposed to annual damages in millions of dollars.

Section 11: CUMULATIVE IMPACTS

The combined incremental effects of human activity are referred to as cumulative impacts (40 CFR 1508.7). While these incremental effects may be insignificant on their own, accumulated over time and from various sources, they can result in serious degradation to the environment. The cumulative impact analysis must consider past, present, and reasonably foreseeable actions in the study area. The analysis must also include consideration of actions outside of the Corps, to include other State and Federal agencies. As required by NEPA, the Corps has prepared the following assessment of cumulative impacts related to the alternatives being considered in this EA.

Historically, the Missouri River and its floodplain has been altered by past actions such as bank stabilization, dams on the river and its tributaries, roads/bridges, agricultural and urban levees, channelization, farming, water withdrawal for human and agricultural use, urbanization and other human uses. These activities have substantially altered the terrestrial and aquatic ecosystem within the Missouri River watershed.

The repairs of damaged levees are expected to continue in the future as unpredictable flood events of the Missouri River occur. The USACE, which administers Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, has issued and will continue to evaluate permits authorizing the placement of fill material in the Waters of the United States and/or work on, in, over or under a navigable water of the United States including the Missouri River and its tributaries. Environmental resources typically affected by levee repair actions such as these may include wetlands, fish and wildlife resources, water quality, agricultural, and riparian woodlands. However, the impacts to these resources are usually minor and short term, and minor and long-term.

The proposed action would involve restoring the grassed slopes and eroded banks on Missouri River Levee System Unit 497 that was damaged during the May 2007 flood to its pre-existing conditions. The proposed levee repair action would result in short-term, minor impacts to water quality and wildlife resources during construction activities. In addition, minor, long term impacts would result from the removal of a few small trees (2 inch diameter) and brush located between the levee and Mill Creek. Minor, long-term impacts to aquatic organisms would occur with the placement of quarry rock fill in and along Mill Creek. However, the environmental resources of the project area have been altered and disturbed by past actions; the proposed levee repairs are minor, short-term or minor, long-term, and are a part of maintaining the pre-existing condition of the levee system after a flood event. Overall, these minor impacts are greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system. In addition, the proposed action would not directly or indirectly support more development in the floodplain or encourage additional occupancy and/or modification of the base floodplain. Thus, no significant cumulative impacts associated with the proposed rehabilitation of the existing levee system have been identified.

Section 12: MITIGATION MEASURES

The recommended plan would not result in significant adverse impacts to mitigable resources as defined in USACE Planning regulations or under Section 404 of the Clean Water Act. Minor, long-term impacts would result from the placement of quarry rock fill along/in Mill Creek, but this action is not considered significantly adverse to the aquatic ecosystem and is covered under the issued Regional General Permit No. 41 (Appendix II). In addition, minor, long term impacts would result from the removal of a few small trees (2 inch diameter) and brush located between the levee and Mill Creek. No alternative exist that would involve the removal of mast producing trees and/or impacting ½ acre or more of trees averaging greater than 9 inches diameter at breast height (dbh). Therefore, no mitigation measures are warranted or proposed.

Section 13: COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES

The Compliance with Designated Environmental Quality Statutes that have not been specifically addressed earlier in this report is covered in Table 2. Additional information is listed for the most pertinent statutes following the table.

Table 2
Compliance of Recommended Plan with Environmental Protection
Statutes and Other Environmental Requirements

Federal Policies	Compliance
Archeological Resources Protection Act, 16 U.S.C. 470, et seq.	Full Compliance
Clean Air Act, as amended, 42 U.S. C. 7401-7671g, et seq.	Full Compliance
Clean Water Act (Federal Water Pollution Control Act), 33 U.S.C. 1251, et seq.	Full Compliance
Coastal Zone Management Act, 16 U.S.C. 1451, et seq.	Not Applicable
Endangered Species Act, 16 U.S.C. 1531, et seq.	Full Compliance
Estuary Protection Act, 16 U.S.C. 1221, et seq.	Not Applicable
Federal Water Project Recreation Act, 16 U.S.C. 4601-12, et seq.	Full Compliance
Fish and Wildlife Coordination Act, 16 U.S.C. 661, et seq.	Full Compliance
Land and Water Conservation Fund Act, 16 U.S.C. 4601-4, et seq.	Not Applicable
Marine Protection Research and Sanctuary Act, 33 U.S.C. 1401, et seq.	Not Applicable
National Environmental Policy Act, 42 U.S.C. 4321, et seq.	Full Compliance
National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470a, et seq.	Full Compliance
Rivers and Harbors Act, 33 U.S.C. 403, et seq.	Full Compliance
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et seq.	Full Compliance
Wild and Scenic River Act, 16 U.S.C. 1271, et seq.	Not Applicable
Farmland Protection Policy Act, 7 U.S.C. 4201, et. seq.	Full Compliance
Protection & Enhancement of the Cultural Environment (Executive Order 11593)	Full Compliance
Floodplain Management (Executive Order 11988)	Full Compliance
Protection of Wetlands (Executive Order 11990)	Full Compliance
Environmental Justice (Executive Order 12898)	Full Compliance

NOTES:

a. Full compliance. Having met all requirements of the statute for the current stage of planning (either preauthorization or postauthorization).

- b. Partial compliance. Not having met some of the requirements that normally are met in the current stage of planning.
- c. Noncompliance. Violation of a requirement of the statute.
- d. Not applicable. No requirements for the statute required; compliance for the current stage of planning.

Clean Water Act, Section 404 and 401

The recommended plan would involve placement of fill material in Waters of the United States and therefore, Clean Water Act, Section 401 Water Quality Certification (Appendix II) and Section 404 are required. This work is an action covered under the General Permit No. 41 (Appendix II).

Clean Water Act, Section 402

A NPDES permit has been received from Missouri Department of Natural Resources and is located in Appendix II.

Endangered Species Act, Section 7

The Corps of Engineers has made a determination that no impacts to any federally listed threatened or endangered species or their habitat would occur with the project action. Coordination of ESA would be completed upon review of this EA and concurrence of this determination with the USFWS.

National Historic Preservation Act

No sites listed on or eligible for listing on the National Register of Historic Places are located within or near the proposed project area. Therefore, no coordination with the Missouri State Historic Preservation Office (SHPO) is required for the project.

Section 14: CONCLUSION

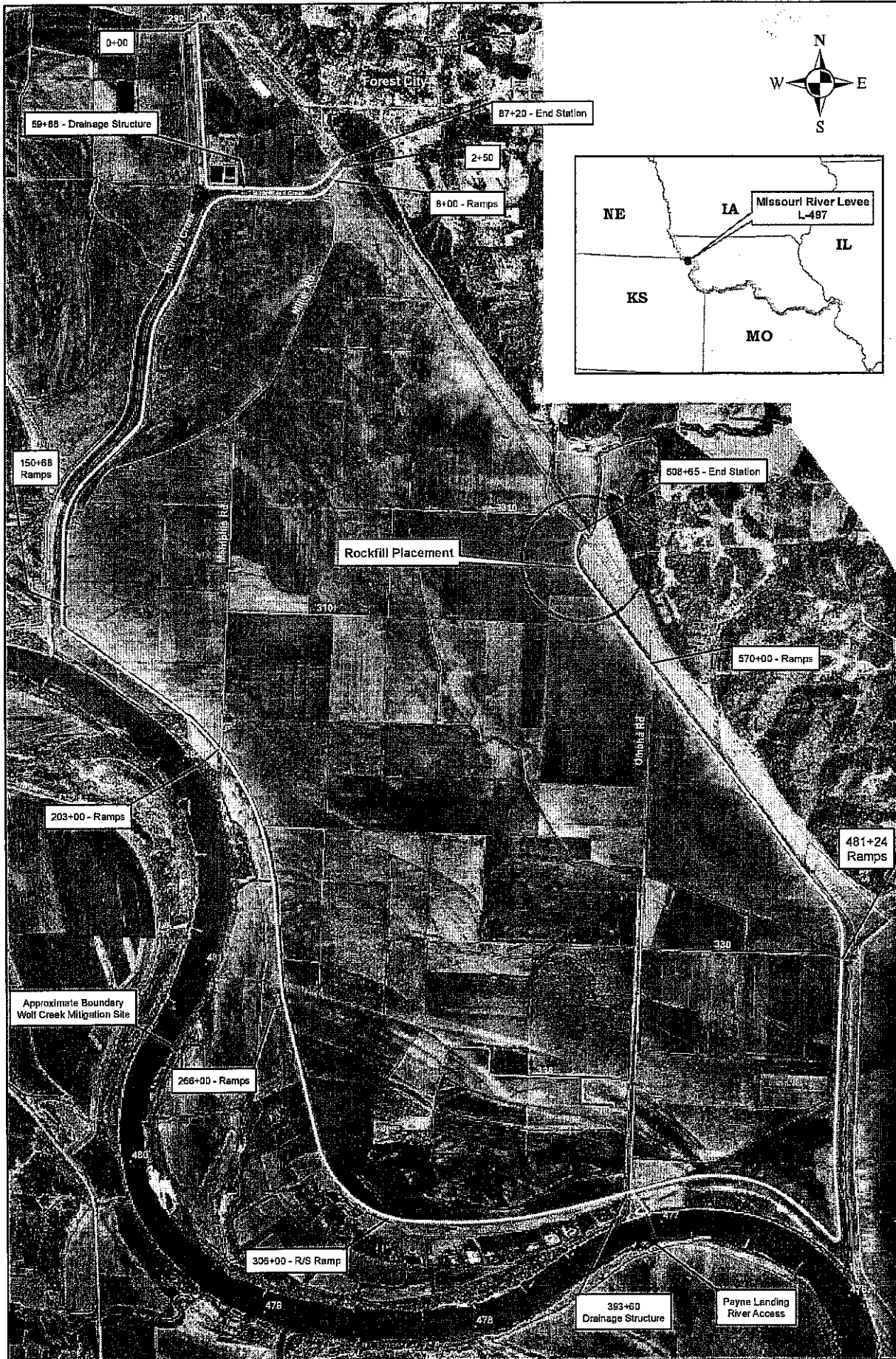
The proposed levee repair action would result in short-term, minor impacts to water quality and wildlife resources during construction activities. In addition, minor, long term impacts would result from the removal of a few small trees (2 inch diameter) and brush located between the levee and Mill Creek. Minor, long-term impacts to aquatic organisms would occur with the placement of quarry rock fill in and along Mill Creek. However, the environmental resources of the project area have been altered and disturbed by past actions; and the proposed levee repairs are a part of maintaining the pre-existing condition of the levee system after a flood event. Therefore, these impacts are not considered significantly adverse. Overall, these minor impacts are greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system.

Section 15: PREPARERS

This EA and the associated draft FONSI was prepared by Ms. Lekesha Reynolds (Environmental Resource Specialist), with relevant sections prepared by Mr. Timothy Meade (Cultural Resources). The address of the preparers is: U.S. Army Corps of Engineers, Kansas City, District; PM-PR, Room 843, 601 E. 12th St, Kansas City, MO 64106.

APPENDIX I – PROJECT DRAWINGS

*Missouri River Levee System Unit 497-L,
Federal Levee Rehabilitation Project,
Holt County, Missouri
May 2008*



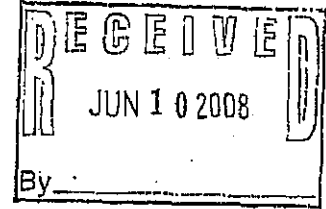
MISSOURI RIVER LEVEE SYSTEM
Levee Unit 497 L

APPENDIX II-NEPA REVIEW

*Missouri River Levee System Unit 497-L,
Federal Levee Rehabilitation Project,
Holt County, Missouri
May 2008*



DEPARTMENT OF THE ARMY
KANSAS CITY DISTRICT, CORPS OF ENGINEERS
700 FEDERAL BUILDING
KANSAS CITY, MISSOURI 64106-2896



REPLY TO

ATTENTION OF:

June 6, 2008

Planning, Programs and Project Management Division
Planning Branch

Charlie Scott
US Fish and Wildlife Service
101 Park DeVille Drive, Suite A
Columbia, Missouri 65203

In accordance with provisions of the National Environmental Policy Act of 1969 (NEPA), enclosed for your review and comment is the Environmental Assessment (EA) and Draft Finding of No Significant Impacts (FONSI) for the Missouri River Levee System Unit No. 497-L Levee Rehabilitation Project.

The U.S. Army Corps of Engineers, Kansas City District (USACE), in cooperation with the project sponsor, Forest City Levee District of Holt County, Missouri, proposes to rehabilitate the Missouri River Levee System Unit No. 497-L under the authority of Public Law 84-99 of the Flood Control Act of 1944. Under this authority, the Corps of Engineers can provide assistance to public agencies in responding to flood emergencies such as the rehabilitation of flood control works damaged or destroyed by floods.

The project area is located in Holt County, Missouri along the left descending bank of the Missouri River, between river miles 476 to 483, Right Descending bank of Mill Creek and the Left Descending bank of Kimsey Creek, near the town of Forest City, Missouri. The proposed project would consist of seeding the areas of the riverside slope and the immediate foreshore within the permanent right-of-way that were subject to grass kill as a result of the May 2007 flood event; and replacing aggregate surfacing on Mill Creek's right bank

Written comments on the EA and Draft FONSI should be mailed to Ms. Lekesha Reynolds, Environmental Resources Specialist, Corps of Engineers, Kansas City District, PM-PR, 601 E. 12th Street, Kansas City, Missouri 64106-2896, or by phone at (816) 389-3160 or by email at lekesha.w.reynolds@usace.army.mil. The public review and comment period for the EA and draft FONSI will end 30 days from the date of this letter.

Sincerely,

David R. Hibbs
Acting Chief, Environmental Resources Section

"The U.S. Fish and Wildlife Service has reviewed the subject proposal and accompanying information and determined that the activity as described is not likely to adversely affect federally listed species or designated critical habitat. Consequently, this concludes section 7 consultation. Please contact the Missouri Department of Conservation (573/522-4115) for state listed species of concern."

for the Field Supervisor

6/10/2008
Date

PUBLIC NOTICE



US Army Corps
of Engineers
Kansas City District

Permit No. GP-41 (2007-2078)
Issue Date: March 21, 2008

STATES OF MISSOURI AND KANSAS - Including INDIAN COUNTRY
ISSUANCE OF GENERAL PERMIT (GP) 41
FLOOD RECOVERY AND REPAIR ACTIVITIES

The U.S. Army Corps of Engineers, Kansas City District **HAS ISSUED** GP-41 (copy enclosed) for protection and repair of existing flood damaged structures, damaged land areas and damaged fills, under authority of Section 10 of the Rivers and Harbors Act of 1988 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

Duration of this General Permit: This GP is issued and is in effect for five (5) years, from March 21, 2008 until March 21, 2013, unless revoked or specifically extended.

Notification Procedures (Post and Preconstruction): Preconstruction notification is required by the General Public for all activities involving obtaining borrow from forested wetlands, borrowing material from potential migratory bird nesting areas, clearing trees along stream channels, working in areas with known exotic species, and/or if the proposed repair activity includes restoration of a stream channel back to the original, pre-flood location. Other authorized activities that meet the terms and limits of this GP may proceed without preconstruction notification to the Corps of Engineers. However, post construction reporting is required for all activities undertaken under this GP. See GP Special condition "d" and Appendix I for more information on notification requirements.

APPLICANT: General Public

PROJECT LOCATION: In waters of the United States in the States of Missouri and Kansas, including Indian Country within Kansas boundaries that are declared flood disaster areas by the Governor of either state and/or the President of the United States of America.

AUTHORITY: Section 10 of the Rivers and Harbors Act of 1988 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

ACTIVITY: Excavation or placement of fill material for protection and/or repair of existing flood damaged structures, damaged land areas and/or damaged fills as follows: a. Repair of levees to existing elevations and cross-section, including breach closures and borrow operations, b. Bridge embankment protection (armoring) and/or repair, c. Repair of pre-existing highway or railroad embankments and the addition or repair of stone (armoring) protection, d. Repair of pre-existing utility protection structures, e. Placement of rock and/or earth materials for stream/ditch bank protection and/or stream/ditch bank restoration, f. Drainage channel/ditch restoration to

pre-flood capacity and flow line unless the flow line must be altered due to other damage associated with the flood event, g. Restoration of creek channels to pre-flooding alignment and capacity, and h. Construction of temporary roads and temporary fills to facilitate the completion of any of the listed activities.

Note: Maintenance of existing flood damaged structures and/or flood damaged fills, which have been previously authorized, may be authorized by Nationwide Permit No. 3 or exempted by Part 323.4 of Federal regulations 33 CFR 320-331. The repair of uplands damaged by storms, floods or other discrete events may be authorized by Nationwide Permit No. 45 upon notification and review by the appropriate Corps of Engineers District, Regulatory Branch.

INDIAN COUNTRY: Work under this permit is not authorized in Indian Country until the applicant obtains individual Section 401 Water Quality Certification from the U.S. Environmental Protection Agency (EPA), Region VII, Watershed Planning and Implementation Branch, 901 North 5th Street, Kansas City, Kansas 66101 (913-551-7003).

EPA may issue programmatic water quality certification during the authorization period of this permit which ends December 31, 2013. If issued, the Corps of Engineers will announce by public notice and post that certification to the Regulatory Program webpage:
<http://www.nwk.usace.army.mil/regulatory/regulatory.htm>.

SECTION 401 WATER QUALITY CERTIFICATION: Conditions of any individual or programmatic Section 401 Water Quality Certifications issued by the Missouri Department of Natural Resources (MDNR - for Missouri), Kansas Department of Health and Environment (KDHE - for Kansas), and EPA (for Indian Country) are conditions of this GP. General Condition 5 of the GP states: "If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit."

ADDITIONAL INFORMATION: Additional information about this general permit may be obtained by contacting Mr. Douglas R. Berka, Regulatory Project Manager, Kansas City District Regulatory Branch (ATTN: OD-R) 700 Federal Building, Kansas City, Missouri 64106, at 816-389-3657 or via email at Douglas.R.Berka@usace.army.mil. All inquiries concerning this public notice should be directed to the above address.

Enclosure

DEPARTMENT OF THE ARMY PERMIT

Permittee General Public

Permit No. NWK GP-41

Issuing Office U.S. Army Corps of Engineers, Kansas City District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To excavate or place fill material for protection and/or repair of existing flood damaged structures, damaged land areas and/or damaged fills as follows:

- a. Repair of levees to existing elevations and cross-section, including breach closures and borrow operations
- b. Bridge embankment protection (armoring) and/or repair
- c. Repair of pre-existing highway or railroad embankments and the addition or repair of stone (armoring) protection
- d. Repair of pre-existing utility protection structures
- e. Placement of rock and/or earth materials for stream/ditch bank protection and/or stream/ditch bank restoration
- f. Drainage channel/ditch restoration to pre-flood capacity and flow line unless the flow line must be altered due to other damage associated with the flood event
- g. Restoration of creek channels to pre-flooding alignment and capacity
- h. Construction of temporary roads and temporary fills to facilitate the completion of any of the listed activities

Note: Maintenance of existing flood damaged structures and/or flood damaged fills, which have been previously authorized, may be authorized by Nationwide Permit No. 3 or exempted by Part 323.4 of Federal regulations 33 CFR 320-331. The repair of uplands damaged by storms, floods or other discrete events may be authorized by Nationwide Permit No. 45 upon notification and review by the appropriate Corps of Engineers District, Regulatory Branch.

Project Location: In Waters of the United States, (rivers, lakes, streams, and wetlands) within the State of Kansas, including Indian Country, and within the State of Missouri that are declared flood disaster areas by the Governor of either state and/or the President of the United States.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2013. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

See continuation sheets, pages 4, 5, and 6 of this document.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(x) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(x) Section 404 of the Clean Water Act (33 U.S.C. 1344).

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorization required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. **Reevaluation of Permit Decision.** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. **Extensions.** General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

General Public – Signature Not Required

(PERMITTEE)

(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



(DISTRICT COMMANDER)

ROGER A. WILSON, JR.
BY: MARK D. FRAZIER
Chief, Regulatory Branch
Operations Division

21 March 2008

(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE)

(DATE)



Kathleen Sebelius, Governor
Roderick L. Bremby, Secretary

DEPARTMENT OF HEALTH
AND ENVIRONMENT

www.kdheks.gov

Division of Environment

January 31, 2008

Mr. Douglas R. Berka
U.S. Army Corps of Engineers
Kansas City Field Office; 700 Federal Building
601 East 12th Street
Kansas City, Missouri 64106-2896

Section 401 Water Quality Certification

RE: (2007-0078) PROPOSED REGIONAL GENERAL PERMIT NO. 41 FOR
EXCAVATION OR PLACEMENT OF FILL MATERIAL FOR THE PERMANENT
PROTECTION AND/OR REPAIR OF FLOOD DAMAGED STRUCTURES, DAMAGED LAND
AREAS AND/OR DAMAGED FILLS IN THE STATES OF KANSAS AND MISSOURI.
PERMITTEES: General Public, Railroads, Transportation Departments, Pipeline and
Utility Companies and Government Agencies

Dear Mr. Berka:

The Kansas Department of Health and Environment has received your request for
Section 401 Water Quality Certification. The KDHE has determined the project has the
following water pollutant discharge sources:

- a. Repair of levees to existing elevations and cross-section, including breach
closures and borrow operations
- b. Bridge embankment protection (armoring) or repair
- c. Repair of pre-existing highway or railroad embankments and the addition or
repair of stone (armoring) protection
- d. Repair of pre-existing utility protection structures
- e. Placement of rock and/or earth materials for stream/ditch bank protection
and/or stream/ditch bank restoration

BUREAU OF WATER – WATERSHED MANAGEMENT SECTION
CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE. 420, TOPEKA, KS 66612-1367

Voice 785-296-4195 Fax 785-296-5509

<http://www.kdheks.gov/nps/index.html>

f. Drainage ditch restoration to pre-flood capacity and flow line unless the flow line must be altered due to other damage associated with the flood event

g. Restoration of creek channels to pre-flooding alignment and capacity

h. Construction of temporary haul roads to facilitate the completion of any of the listed activities

Discharges from these sources if not minimized or otherwise controlled may cause violations of the provisions of Kansas Water Quality Standards found at KAR 28-16-28 et seq.

Pursuant to Section 401 and KAR 28-16-28(c) the Kansas Department of Health and Environment finds this project will not result in a violation of Kansas Water Quality Standards and herewith issues a Water Quality Certification for execution and subsequent operation of the project subject to the following conditions:

- I. **Limitations of this Certification:** All Section 404 activities within the borders of Indian owned and operated lands are not covered by this certification. Individuals proposing projects which impact those waters are responsible for contacting the appropriate individual at the following numbers:

Prairie Band Pottawatomie Indians, Planning Department, 785/966-2946

Kickapoo Tribe in Kansas, Environmental Office, 785/486-2601

Iowa of Tribe of Kansas and Nebraska, 785/595-3258

Sac and Fox Tribe of Missouri, 785/742-4707

Environmental Protection Agency Region VII Indian Lands Contact,
913/551-7498

II.

General Conditions

1. **Certification Retention:** The applicant shall retain this water quality certification on the project site through the duration of the project to accommodate inspection.
2. **Kansas Water Pollution Control General Permit for Stormwater Runoff from Construction Activities:** This certification does not relieve the applicant of the responsibility to determine if the project is subject to the requirements of **General NPDES Permit** and to secure such permit as necessary. Questions and inquiries may be directed to:

Mr. Larry Hook
Kansas Department of Health and Environment
Bureau of Water Industrial Program Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367
Phone 785/296-5549; FAX: 785/296-5509
www.kdheks.gov/stormwater

3. **Project Water Quality Protection Plan:** Any person wishing to use a Section 404 GP 41 Permit shall prepare and follow a written project water quality protection plan (PWQPP.) The PWQPP shall identify components of the permitted activity (i.e. solid waste handling, fuel storage and leaks, sediment from construction etc.) which may or will result in the discharge of pollutants to waters of the state. For each component which may discharge pollutants to waters of the state, the plan shall set out the physical, structural and management measures to be implemented to prevent or minimize the discharge of pollutants to waters of the state. (Activities requiring a construction stormwater permit, as described above, also require a stormwater pollution prevention plan which will serve as the PWQPP.)

The permittee is required to submit the PWQPP to KDHE only if the project impacts Outstanding National Resource, Exceptional State or Special Aquatic Life Use Waters per condition #4 below.

- 4 **Outstanding National Resource Waters, Exceptional State and Special Aquatic Life Support Use Waters:** In the event the permitted activity occurs in or within one half (2) mile of an Outstanding National Resource Water as defined pursuant to K.A.R. 28-16-28b(pp) and K.A.R. 28-16-28c(a)B(3), an Exceptional State Water pursuant to K.A.R. 28-16-28b(y) and K.A.R. 28-16-28c(a)B(2), or a Special Aquatic Life Support Use Water designated pursuant to K.A.R. 28-16-28d(b)(2)(A), the person responsible for initiating the activity shall submit a copy of the PWQPP to:

Kansas Department of Health and Environment
Bureau of Water - Watershed Management Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367
nps@kdhe.state.ks.us

A table and state map of **Outstanding National Resource Waters, Exceptional State and Special Aquatic Life Support Use Waters** can be found at:
<http://www.kdheks.gov/nps/resources/specwaterinfo.pdf>.

The permittee should also be aware of the following Kansas water quality protection regulations associated with special waters:

K.A.R. 28-16-28c(a)B(2)-AWherever state surface waters constitute exceptional state waters, discharges shall be allowed only if existing uses and existing water quality are maintained and protected.@

K.A.R. 28-16-28c(a)B(3)-AWherever state surface waters constitute an outstanding national resource water existing uses and existing water quality shall be maintained and protected. New or expanded discharges shall not be allowed into outstanding national resource waters.@

5. **Solid Waste Disposal:** All solid waste materials produced during the execution of the project shall be disposed in accordance with the provisions of Kansas Solid Waste Management Statutes and regulations and applicable local regulations. Direct inquiries to:

KDHE, Bureau of Waste Management
1000 SW Jackson Street, Suite 320
Topeka, Kansas 66612-1366
Phone: 785/296-1600; FAX: 785/296-1592
www.kdhe.state.ks.us/waste/index.html

6. **Equipment Staging Areas and Project Closure:** Upon completion of the project, disturbed areas shall be expeditiously stabilized with temporary and permanent vegetation, bio-artificial ground cover or other appropriate non-polluting material. Fertilizer application to establish and maintain vegetation shall be done in a manner that will not contribute to the current nutrient load to any of the surface waters impacted by the project. The person responsible for the permitted activity shall monitor and maintain cover materials until such time as the site is stabilized. Project closure procedures shall be documented in the Project Water Quality Protection Plan per condition No. II. 3.
7. **Riparian Areas:** Minimize removal or disturbance of riparian areas (areas adjacent to water bodies). KDHE encourages the use of vegetation consistent with adjoining vegetation materials to minimize impacts from improper handling of fertilizers and pesticides.
8. **Discharge of Floatable Materials:** Pursuant to K.A.R. 28-16-28b (uu)(1), (3) and (4), the person responsible for executing the permitted activity shall assure good house keeping is practiced at the site to minimize the discharge of floatable materials such as personal refuse including food containers, packing materials, and other litter. Appropriate measures shall be taken to capture and/or recover any floatable materials discharged to waters of the state originating with the permitted project.

9. **Fuel, Chemical and Materials Storage:** Fuel, chemical and other materials stored at the project site shall be stored in a manner that minimizes the discharge of product to waters of the state. Spill minimization and prevention measures and procedures shall be documented in the Water Quality Protection Plan.
10. **Spill Response and Reporting:**
 - 1.) **Spill response and cleanup:** In the event a spill of fuel, chemical or other water quality degrading materials stored or transported on the site occurs, the permittee shall or with the assistance of professional response personnel, expeditiously control or contain the spill and initiate clean up procedures. The applicant shall immediately contact 911. Spill response and cleanup actions shall be documented in the PWQPP. The applicant should also contact the appropriate Kansas Department of Health and Environment www.kdhegov/befs/#districts or look in your local phone directory) to confirm cleanup activities. Finally, KDHE strongly encourages the permittee to establish and post a sign that includes phone contact numbers for the appropriate local emergency response unit, KDHE district office, and the project manager/owner.
 - 2.) **Reporting:** The Kansas Department of Health and Environment shall be notified of all fuel spills or unauthorized discharge of pollutants immediately. Contact KDHE at 785/296-1679, anytime for spill reporting requirements. The Kansas Adjutant Generals Office should also be contacted (785/296-8013) as well as the National Spill Response Center (1-800-424-8802).
11. **Drinking Water Intakes:** The person responsible for the permitted activity shall avoid adverse impacts on public water supplies. Whenever permitted activities occur within one mile upstream of a public drinking water supply - surface water intake, the applicant shall contact the official in charge of the public drinking water supply to apprise the drinking water supply official of the permitted activity. The person responsible for the permitted activity shall consider the suggestions and recommendations of the public water supply official when preparing the PWQPP.
12. **Treated Wastewater Effluent Mixing Zones:** As a general guideline any Section 404 activity within one-half (2) mile upstream or one-half (2) mile downstream of a permitted wastewater effluent discharge may impact the effluent mixing zone. The person responsible for the permitted activity shall determine if the project will adversely impact the wastewater effluent mixing zones and take appropriate measures to avoid altering or changing the mixing zone. This may include but is not limited to:

- 1) The construction or placement of a recreation oriented facility or structure (i.e. boat ramp, walkway) which may require modification of the beneficial use designation to accommodate contact or non-contact recreation, thereby increasing the effluent limitations for the permit.
- 2) Any activity which may alter or remove the stream channel geometry or natural oxygenation abilities of the stream such as bridge construction, channelization, stream channel substrate modification etc.

The person responsible for the permitted Section 404 activity shall advise and describe to the waste water discharge permittee and KDHE any potential mixing zone impacts and the measures the person responsible for the Section 404 activity will take to minimize adverse impacts on the mixing zone. Inquiries should be directed to:

Kansas Department of Health and Environment
Bureau of Water - Municipal Programs Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367
Phone: 785/296-5527; FAX: 785/296-5509

13. **Total Maximum Daily Load:** Any Section 404 activity within a watershed with a Total Maximum Daily Load (the amount of pollution a water body can receive and maintain its designated uses: see <http://www.kdheks.gov/tmdl/index.htm>) is strongly encouraged to contact the assigned KDHE watershed field coordinator. A service area map for the three watershed field coordinators is attached (see www.kdheks.gov/nps) once construction is started.

III. Special Conditions for Specific Nationwide Permits

1. **Outfall Structures and Maintenance (construction):**
Controls shall be in place to stabilize all areas of the bed and bank around the pipe or adjacent to the outfall structure and associated intake structures that may be affected by outfall or stream flows, respectively.
2. **Maintenance; Utility Line Activities; and -Minor Discharges (pipelines included):**
Hydrostatic tests for pipeline activities shall be approved prior to discharge of water used for the test. Please contact:

Kansas Department of Health and Environment
Bureau of Water - Industrial Program Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367
Phone 785/296-5553; FAX: 785/296-5509

3. **Aquatic Habitat, Restoration, Establishment and Enhancement Activities and Stormwater Management Facilities):** Measures shall be implemented to assure impounded waters, created by activities within the framework of these permits, avoid becoming public health threats, nuisances, generate complaints, and potentially discharge degraded water. The applicant shall prepare and implement an Operations and Maintenance Plan for Facilities and Landscapes (O&M), which at the minimum incorporate the following:
- A. Identify individual and public property owners and their potential for being the source of nonpoint source pollution. This could include but is not limited to: commercial grounds, streets, right-of-ways, parking areas, conservation easement and **proposed** mitigation areas etc.
 - B. For each property as described in item A. above, water quality protection measures for each category of artificial source of pollution identified. The identified water quality protection measure for each category of artificial source of pollution shall be designed to *reduce to the maximum extent practicable, the level of pollution resulting from identified pollutant sources*. Identified water quality protection quality protection measures shall be at least as effective as those set out by the Kansas Nonpoint Source Pollution Management Plan (<http://www.kdheks.gov/nps/resources/2000update.pdf>), prepared and maintained by the Kansas Department of Health and Environment.
 - C. Strategies to assure implementation of the water quality protection measures identified under item II. 3-10 which may include but are not limited to prohibition or restriction of activities, utilization of alternative technologies or products, information and education, financial assistance, technical assistance, enforcement and penalties. Additionally, an in-house reporting form used by staff to document degraded property conditions potentially impacting the property and needs to address them should be developed, if applicable.
 - D. Organizations and individuals responsible for assuring implementation of the identified water quality protection measures.

IV. **Enforcement and Penalties**

This certification does not relieve the applicant of the responsibility for any discharge to waters of the state or allow for any inappropriate discharge to occur. As provided for by K.S.A. 65-171(f), failure to comply with the conditions of this certification may subject the responsible party to fines of \$10,000 per violation with each day the violation occurs constituting a separate violation.

V. Variance

If the applicant believes the conditions of this certification will result in impairment of important widespread social and economic development, the applicant is advised of the variance provisions of KAR 28-16-28b(III) and KAR 28-16-28f(e).

VI. Additional Information

The KDHE website contains the following information to assist the applicant in preparing a project water quality protection plan:

*Construction practices: <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>

*Project Water Quality Protection Plan Form and Instructions:
<http://www.kdheks.gov/nps/resources/nwpwqppfrm.doc> or
<http://www.kdheks.gov/nps/resources/nwpwqppfrm.pdf>

*Kansas Surface Water Register:
http://www.kdheks.gov/befs/download/Current_Kansas_Water_Register.pdf

*Kansas Surface Water Maps:
http://www.kdheks.gov/befs/download/2006_Surface_Water_Register_Maps.pdf

Surface Water Quality Standards- http://www.kdheks.gov/water/28_16_28b_g.pdf

*KDHE District Offices- <http://www.kdheks.gov/directions/index.html>

The Kansas Department of Health and Environment, Bureau of Water-Watershed Management Section at: 785/296-4195 or FAX 785/296-5509. This information can also be obtained by written communication directed to:

Kansas Department of Health and Environment
Bureau of Water - Watershed Management Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367 or email: nps@kdhe.state.ks.us

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Matt Blunt, Governor • Doyle Childers, Director

www.dnr.mo.gov

FEB 25 2008

Colonel Roger A. Wilson, Jr.
U.S. Army Corps of Engineers
Kansas City District
601 E. 12th Street, Suite 700
700 Federal Building
Kansas City, MO 64106-2896

GP-41 Statewide
NWKG-41/PN07-2078/CEK004650

RE: GP 41, All Districts

Dear Colonel Wilson:

The Missouri Department of Natural Resources' Water Protection Program (department) has reviewed Public Notice General Permit (GP) 41 (PN07-588) CEK004650 in which the applicant proposes to issue regional GP-41 to authorize certain discharges of dredged or fill material in conjunction with the permanent protection and/or repair of flood damaged structures, damaged areas, and/or damaged fills in waters of the United States within the states of Missouri and Kansas.

The proposed General Permit would be applicable to all Army Corps of Engineers' Districts in Missouri (Kansas City - 2007-2078/GP-41; Little Rock - 2008-00066/GP-41, Memphis - 2007-588/GP-41; Rock Island - 2007-2061/GP-35; and St. Louis).

These projects are located along the Missouri River throughout Missouri. The Missouri River is a 303(d) listed water and caution shall be exercised not to negatively impact those sections of the river that are already impaired.

This office certifies that the proposed project will not cause the general or numeric criteria to be exceeded nor impair beneficial uses established in the Water Quality Standards, 10 CSR 20-7.031, provided the following conditions are met:

1. This general permit shall not be used for channelization or channel modification purposes.
2. Only the repair of structures due to flood damage are authorized with this permit. The construction of new structures will need additional review and issuance of a separate water quality certification.
3. Representatives from the department shall be allowed to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the letters and conditions of the permit.



Recycled Paper

4. Care shall be taken to keep machinery out of the waterway as much as possible. Fuel, oil and other petroleum products, equipment and any solid waste shall not be stored below the ordinary high water mark at any time or in the adjacent floodway beyond normal working hours. All precautions shall be taken to avoid the release of wastes or fuel to streams and other adjacent water bodies as a result of this operation.
5. Petroleum products spilled into any water body or on the banks where the material may enter waters of the state shall be immediately cleaned up and disposed of properly.
6. Only clean, nonpolluting fill shall be used. The following materials are not suitable for bank stabilization and shall not be used due to their potential to cause violations of the general criteria of the Water Quality Standards, 10 CSR 20-7.031 (A) – (H):
 - a. Earthen fill, gravel, broken concrete where the material does not meet the specifications outlined below, and fragmented asphalt, since these materials are usually not substantial enough to withstand erosive flows;
 - b. Concrete with exposed rebar;
 - c. Tires, vehicles or vehicle bodies, construction or demolition debris are solid waste and are excluded from placement in the waters of the state;
 - d. Liquid concrete, including grouted riprap, if not placed as part of an engineered structure; and
 - e. Any material containing chemical pollutants (for example: creosote or pentachlorophenol).

Recycled or broken concrete may be used provided that it is reasonably well graded, consisting of pieces varying in size from 20 pounds up to and including at least 150 pound pieces. Applicants must break all large slabs to conform to the well-graded requirement. Generally, the maximum weight of any piece shall not be more than 500 pounds. Gravel and dirt shall not exceed 15 percent of the total fill volume. All protruding reinforcement rods, trash, asphalt and other extraneous materials must be removed from the broken concrete prior to placement.

Recycled or broken concrete being used simply as fill need not conform to the well-graded requirement. It shall, however, be free from extraneous materials and shall be placed to eliminate voids within the fill.

7. Clearing of vegetation/trees shall be the minimum necessary to accomplish the activity. A vegetated corridor shall be maintained from the high bank on either side of the jurisdictional channel to protect water quality and to provide for long-term stability of the stream channel, unless physical barriers prevent such a corridor.
8. The riparian area, banks, etc., shall be restored to a stable condition to protect water quality as soon as possible. Seeding, mulching and needed fertilization shall be within three days

of final contouring. On-site inspections of these areas shall be conducted as necessary to ensure successful re-vegetation and stabilization, and to ensure that erosion and deposition of soil in waters of the state is not occurring from these projects.

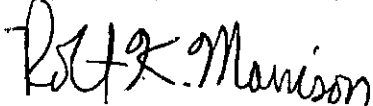
9. Best Management Practices shall be used during construction and/or repair to limit the amount of sedimentation into adjacent water bodies.
10. Temporary fills shall be removed promptly and the fill site restored immediately following construction.
11. The attendant Water Quality Certification for this permit shall not be construed or interpreted to imply the requirements for other permits are replaced or superceded. Any National Pollutant Discharge Elimination System (NPDES) Permits, Land Disturbance General Permits, or other requirements shall be complied with.
12. After avoidance and minimization for projects, impacts must be compensated for. Mitigation for the loss of aquatic stream resources shall be in conformance with the *Missouri Stream Mitigation Method*. This document may be found at the following link:
www.mvs.usace.army.mil/permits/permits.asp.

You may appeal to have the matter heard by the administrative hearing commission. To appeal, you must file a petition with the administrative hearing commission within thirty (30) days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission.

Water Quality Standards must be met during any operations authorized by these permits. If you have any questions, please contact Ms. Carrie M. Schulte of the NPDES Permits and Engineering Section by phone at (573) 751-7023, by e-mail at carrie.schulte@dnr.mo.gov, or by mail at Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65109.

Sincerely,

WATER PROTECTION PROGRAM

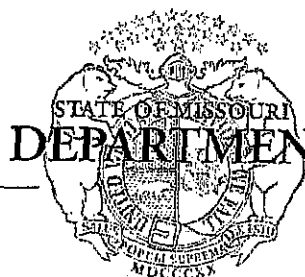


Robert K. Morrison, P.E., Chief
Water Pollution Control Branch

RKM:csp

- c: Mr. Bill Goodwin, Missouri Department of Conservation
- Mr. Doyle Brown, Missouri Department of Conservation
- Ms. Janet Sternburg, Missouri Department of Conservation
- Mr. Mike Smith, Missouri Department of Conservation
- Mr. Stuart Miller, Missouri Department of Conservation
- Mr. Doug Berka, Army Corps of Engineers, Kansas City District
- Mr. Keith McMullen, Army Corps of Engineers, St. Louis District
- Mr. Larry Watson, Army Corps of Engineers, Memphis District
- Mr. Wayne Hannel, Army Corps of Engineers, Rock Island District
- Army Corps of Engineers, Kansas City District; MO State Regulatory Office
- Army Corps of Engineers, Kansas City District, Truman Satellite Office
- Army Corps of Engineers, Little Rock District
- Mr. Carl Stevens, U.S. Environmental Protection Agency
- Mr. Rick Hansen, U.S. Fish and Wildlife Service
- DNR – KCRO, SLRO, NERO, SERO, SWRO

U.S. Army Corps of Engineers, KC District
MO-R100043, Various County



Matt Blunt, Governor • Doyle Childers, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

NOV 30 2007

U.S. Army Corps of Engineers, KC District
700 Federal Building, 601 E. 12th Street
Kansas City, MO 64106

Dear Permittee:

Pursuant to the Federal Water Pollution Control Act, under the authority granted to the State of Missouri and in compliance with the Missouri Clean Water Law, we have issued and are enclosing a General State Operating Permit for U.S. Army Corps of Engineers, KC District.

Please review the requirements of your permit. Monitoring reports that may be required by this permit must be submitted on a periodic basis. Copies of the necessary report forms, if required, are enclosed and should be mailed to the regional office listed below. Please contact that office for additional forms.

This General Permit is both your federal discharge permit and your new state operating permit and replaces all previous state operating permits and letters of approval for the discharges described within. In all future correspondence regarding this permit, please refer to your general permit number as shown on page one of your permit.

If you were affected by this decision, you may appeal to have the matter heard by the administrative hearing commission. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission.

If you have any questions concerning this permit, please do not hesitate to contact the Water Protection Program at PO Box 176, Jefferson City, MO 65102 (573) 751-1300.

Sincerely,

WATER PROTECTION PROGRAM

NPDES Permit and Engineering Section

Enclosure

RECEIVED
REGULATORY BRANCH
07 DEC -5 PM 2:30

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT
WATER POLLUTION CONTROL PROGRAM**

General Operating Permit

In compliance with the Missouri Clean Water Law, (chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.: MO-R100043

Owner: U.S. Army Corps of Engineers, KC District
Address: 700 Federal Building, 601 E. 12th Street
Kansas City, MO 64106

Continuing Authority: Same
Same

Facility Name: U.S. Army Corps of Engineers, KC District
Facility Address: 700 Federal Building, 601 E. 12th Street
Kansas City, MO 64106

Legal Description: See Page 2, Various County

Receiving Stream: See Page 2
First Classified Stream: See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein.

FACILITY DESCRIPTION All Outfalls, SIC 1629

Construction or land disturbance activity (e.g., clearing, grubbing, excavating, grading, and other activity that results in the destruction of the root zone) that are performed by or under contract to a city, county, or other governmental jurisdiction that has a storm water control program for land disturbance activities that has been approved by the Missouri Department of Natural Resources.

This permit authorizes only wastewater, including storm waters, discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System, it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law

May 31, 2007
Effective date

November 30, 2007
Issue date

Doyle Childers

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

May 30, 2012
Expiration date
MO 780-1481 (7-94)

Edward Galbraith

Edward Galbraith
Director of Staff, Clean Water Commission

Page 2
Permit Number MO-R100043

This permit accompanies the applicant's General Permit 41 (GP0-41) for the repair of levees due to damages from flooding.

Repair activities may take place anywhere along the Missouri and Grand Rivers and tributaries thereof. Location would be in any county along these waterways from Rulo Nebraska to Saint Louis Missouri.

Detailed receiving stream information is available upon request.

APPLICABILITY

1. This general permit authorizes the discharge of storm water and certain non-storm water discharges from land disturbance sites that are performed by or under contract to a city, county, or other governmental jurisdiction that has a storm water control program and/or SWPPP for land disturbance activities that has been approved by the Missouri Department of Natural Resources.
2. If at any time the Missouri Department of Natural Resources determines that the quality of waters of the state may be better protected by requiring the owner/operator of a permitted site to apply for site specific permits, the Department may require a city, county, or other governmental jurisdiction to obtain a site specific operating permit [10 CSR 20-6.010 (13) and 10 CSR 20-6.200(6)].

The Department may require the permittee to apply for and obtain a site specific or different general permit if:

- a. The permittee is not in compliance with the conditions of this general permit;
- b. The discharge no longer qualifies for this general permit due to changed site conditions and regulations; or
- c. Information becomes available that indicates water quality standards have been or may be violated.

The Department will notify the permittee in writing if there is a need to apply for a site-specific permit or a different general permit. When a site specific permit or different general permit is issued to the authorized permittee, the permit that has been replaced will be automatically terminated upon the effective date of the site specific or different general permit, whichever the case may be. The permittee shall submit the appropriate forms to the Department to terminate the permit that has been replaced.

3. Any owner/operator authorized by a general permit may request to be excluded from the coverage of the general permit and apply for a site-specific permit [10 CSR 20-6.010 (13) and 10 CSR 20-6.200(6)].
4. The owner of the property and/or right-of-way on which a land disturbance site is located is responsible for compliance with this permit. This remains true in the event the owner chooses to contract for the design and/or construction of a project.
5. This permit does not authorize land disturbance activities in violation of the Historic Preservation Act or the Endangered Species Act.
6. This permit is not transferable to other owners or operators.

EXEMPTIONS FROM STATE PERMIT REQUIREMENTS

1. Sites that discharge all storm water runoff directly to a combined sewer system are exempt from state storm water permit requirements.
2. Land disturbance activities as identified in 10 CSR 20-6.200(1)(B) are exempt from state storm water permit requirements as long as there is no violation of water quality standards.
3. Sites that disturb less than one acre of total land area that are not part of a common plan or sale are exempt from state storm water requirements as long as there is no violation of water quality standards.
4. Agricultural storm water discharges and irrigation return flows are exempt from state storm water permit requirements as long as there is no violation of water quality standards. Animal Feeding Operations (AFO) are not included in the agricultural exemption.

REQUIREMENTS

1. All water pollution controls on site shall conform to the DNR-approved storm water control program and/or SWPPP of the city, county, or other governmental jurisdiction in which such land disturbance activities are occurring. The requirements of the approved storm water control program and/or SWPPP must be at least as stringent and may be more stringent than those described in this permit and 10 CSR 20-6.200. The requirements of the DNR approved program and/or SWPPP are enforceable under this permit. The permittee must conduct inspections of all land disturbance sites as described under Requirements, 12. of this permit. If the permittee is a regulated MS4, the approved program and/or SWPPP must comply with the Permittee's MS4 permit.
2. The permittee shall provide a list of active land disturbance sites (of one acre or more) to the department on a quarterly bases. The list shall contain the name of the project, location, receiving stream(s) for each outfall, description of the project, number of acres disturbed, and projected date for completion of the project. The permittee shall submit quarterly reports each January, April, July, and October. The reports must be recieved by the end of the specified month.
3. Discharges shall not cause violations of the Water Quality Standards 10 CSR 20-7.031(3), which states, in part, that no water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - a. Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - b. Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - c. Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - d. Waters shall be free from substances or conditions in sufficient amounts to have a harmful effect on human, animal or aquatic life.
 - e. There shall be no significant human health hazard from incidental contact with the water;
 - f. There shall be no acute toxicity to livestock or wildlife watering;
 - g. Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - h. Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles, or equipment and solid waste as defined in Missouri's Solid Waste Law, Section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to Section 260.200-260.247.
4. Good housekeeping practices shall be maintained by the permittee to keep solid waste from entering waters of the state.
5. The permittee shall comply with all federal and state regulations regarding underground storage, above ground storage, and dispensers of fueling facilities.
6. The permittee shall manage hazardous wastes in accordance with the provisions of the Missouri Hazardous Waste Laws and Regulations. This includes hazardous wastes that are transported, stored, or used for maintenance, cleaning, and repair.
7. The permittee shall designate an individual to be responsible for environmental matters. The individual responsible for environmental matters shall have a thorough and demonstrable knowledge of the site's SWPPP and sediment and erosion control practices in general. The individual responsible for environmental matters or a designated inspector knowledgeable in erosion, sediment, and stormwater control principles, shall inspect all structures that function to prevent pollution of waters of the state.

8. The permittee shall store all paint, solvents, petroleum products and petroleum waste products, and storage containers (such as drums, cans, or cartons) according to best management practices (BMPs). The materials exposed to precipitation shall be stored in watertight, structurally sound, closed containers. All containers shall be inspected for leaks or spillage during the once per week inspection of BMPs.
9. The primary requirement of this permit is the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The permittee must retain a copy of the SWPPP on the construction site during normal working hours and make it available to a department representative upon request.

The SWPPP shall:

- a. Incorporate required practices identified below,
- b. Incorporate erosion control practices specific to site conditions, and
- c. Provide for maintenance and adherence to the plan.

Before any land disturbance activity takes place, the permittee shall develop a SWPPP. This plan must be developed before a permit can be issued and made available as specified under RECORDS

The permittee shall fully implement the provisions of the SWPPP required under this part as a condition of this general permit throughout the term of the land disturbance project.

The purpose of the SWPPP is to ensure the design, implementation, management, and maintenance of Best Management Practices (BMPs) in order to reduce the amount of sediment and other pollutants in storm water discharges associated with the land disturbance activities; comply with the Missouri Water Quality Standards; and ensure compliance with the terms and conditions of this general permit.

The permittee shall select, install, use, operate, and maintain appropriate BMPs for the permitted sites. The following manuals are acceptable resources for the selection of appropriate BMPs.

Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, (Document number EPA 832-R-92-005) published by the United States Environmental Protection Agency (USEPA) in 1992. This manual is available at The USEPA internet site <http://cfpub1.epa.gov/npdes/stormwater/swppp.cfm>;

The latest version of ***Protecting Water Quality: A field guide to erosion, sediment and storm water best management practices for development sites in Missouri***. This manual is available on the department's internet site at: <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>

The permittee is not limited to the use of these guidance manuals. Other guidance publications may be used to select appropriate BMPs. However, all BMPs should be described and justified in the SWPPP. EPA and DNR continue to update BMP information on their web sites. It is recommended that the permittee review this information when developing a SWPPP.

10. SWPPP Requirements: The following information and practices shall be provided for in the SWPPP.
 - a. **Site Description:** In order to identify the site, the SWPPP shall include the facility and outfall information provided in the application form. The SWPPP shall have sufficient information to be of practical use to contractors and site construction workers to guide the installation and maintenance of BMPs. Site boundaries and outfalls shall be marked on a site map included as part of the SWPPP.
 - b. **Selection of Temporary and Permanent Non-Structural BMPs:** The permittee shall select appropriate non-structural BMPs for use at the site and list them in the SWPPP. The SWPPP shall require existing vegetation to be preserved where practical. The time period for disturbed areas to be without vegetative cover is to be minimized to the maximum extent practicable. For sites that will be inactive six months or more, establishing a vegetative cover is a highly recommended choice for a proper BMP.

Examples of non-structural BMPs which the permittee should consider specifying in the SWPPP include: preservation of trees and mature vegetation, protection of existing vegetation for use as buffer strips (vegetative buffer strips of 50 feet are especially encourage along drainage courses), mulching, sodding, temporary seeding, final seeding, geotextiles, stabilization of disturbed areas, preserving existing stream channels as overflow areas when channel straightening or shortening is allowed, soil stabilizing emulsions and tackifiers, mulch tackifiers, stabilized site entrances/exits, and other appropriate BMPs.

- c. Selection of Temporary and Permanent Structural BMPs: The permittee shall select appropriate structural BMPs for use at the site and list them in the SWPPP. Examples of structural BMPs that the permittee should consider specifying in the SWPPP include: diverting flows from undisturbed areas away from disturbed areas, silt (filter fabric and/or straw bale) fences, earthen diversion dikes, drainage swales, sediment traps, rock check dams, subsurface drains (to gather or transport water for surface discharge elsewhere), pipe slope drains (to carry concentrated flow down a slope face), level spreaders (to distribute concentrated flow into sheet flow), storm drain inlet protection and outlet protection, reinforced soil retaining systems, gabions, temporary or permanent sediment basins, and other appropriate BMPs.
- d. Description of Best Management Practices: The SWPPP shall include a description of both structural and non-structural BMPs that will be used at the site. The SWPPP shall provide the following general information for each BMP which will be used one or more times at the site:
 - i. Physical description of the BMP,
 - ii. Site and physical conditions that must be met for effective use of the BMP,
 - iii. BMP installation/construction procedures, including typical drawings, and
 - iv. Operation and maintenance procedures for the BMP.

The SWPPP shall provide the following information for each specific instance where a BMP is to be installed:

- vi. Whether the BMP is temporary or permanent,
 - vii. Where, in relation to other site features, the BMP is to be located,
 - viii. When the BMP will be installed in relation to each phase of the land disturbance procedures to complete the project, and
 - viii. What site conditions must be met before removal of the BMP if the BMP is not a permanent BMP.
- e. Discharges to Valuable Resource Waters:

Storm water discharges as described in 10.e.1, 10.e.2, and 10.e.3 shall be considered discharges to "valuable resource waters".

- 1. Storm water discharges within 1000 stream feet of: Streams identified as a losing stream*,
 - i. Streams or lakes listed as an outstanding national or state resource water*,
 - ii. Reservoirs or lakes used for public drinking water supplies*; or
 - iii. Streams, lakes or reservoirs identified as critical habitat for endangered species*;
 - iv. Streams, lakes, or reservoirs listed as impaired for sediment and/or an unknown pollutant by standard MDNR methodology.*
- 2. Storm water discharges:
 - i. Within 100 stream feet of a permanent stream (class P) or major reservoir (class L2)*, or
 - ii. Within two stream miles upstream of biocriteria reference locations*.
- 3. Storm water discharges where:
 - i. Any of the disturbed area is defined as a wetland (Class W), by 10 CSR 20-7.031(1)(F)7*; or
 - ii. The storm water discharges to a sinkhole or other direct conduit to groundwater.

- f. Total Settable Solids from a storm water outfall must not exceed 2.5 ml/L/hr.
- g. If the disturbed area discharges to a valuable resource water, Total Settable Solids shall not exceed 0.5 ml/L/hr,

(For the purpose of this permit, the term "stream feet" shall mean the distance in feet following the nearest drainage channel from the land disturbance to the valuable resource water.)

* Identified or described in 10 CSR 20, Chapter 7. These regulations are available at many libraries and may be purchased from MDNR by calling the Water Pollution Control Program at (573)751-1300. The regulations are also available from the Missouri Secretary of States Office.

- h. Disturbed Areas: Slopes for disturbed areas must be defined in the SWPPP. A site map or maps, defining the sloped areas for all phases of the project, must be included in the SWPPP. Where soil disturbing activities cease in an area for 14 days or more, the permittee shall construct BMPs to establish interim stabilization. Interim stabilization shall consist of well established and maintained BMPs that are reasonably certain to protect waters of the state from sediment pollution. These BMPs may include a combination of sediment basins, check dams, sediment fences, and mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed and the steepness of the slopes. If the slope of the area is greater than 3:1 (3 feet horizontal to 1 foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, then the permittee must establish interim stabilization within 7 days of ceasing operations on that part of the site. Delays in work caused by inclement weather or equipment malfunction are not considered "ceasing operations" for the purpose of this section, as long as work resumes as soon as possible.
- i. Installation: The permittee shall ensure the BMPs are properly installed at the locations and relative times specified in the SWPPP. Peripheral or border BMPs to control runoff from disturbed areas shall be installed or marked for preservation before general site clearing is started. Storm water discharges from disturbed areas, which leave the site, shall pass through an appropriate impediment to sediment movement, such as a sedimentation basin, sediment traps, silt fences, etc. prior to leaving the land disturbance site. A drainage course change shall be clearly marked on a site map and described in the SWPPP. The location of all BMPs must be indicated on a site map, included in the SWPPP.
- j. Sedimentation Basins: The SWPPP shall require a sedimentation basin for each drainage area with 10 or more acres disturbed at one time. The sedimentation basin shall be sized to contain a volume of at least 3600 cubic feet per each disturbed acre draining thereto. Accumulated sediment shall be removed from the basin as needed to ensure the minimum volume of 3600 cubic feet is maintained. Discharges from the basin shall not cause scouring of the banks or bottom of the receiving stream. The SWPPP shall require the basin be maintained until final stabilization of the disturbed area served by the basin.

Where use of a sediment basin of this size is impractical, the SWPPP shall evaluate and specify other similarly effective BMPs to be employed to control erosion and sediment delivery. These similarly effective BMPs shall be selected from appropriate BMP guidance documents authorized by this permit. The BMPs must provide equivalent protection. The SWPPP shall require both temporary and permanent sedimentation basins to have a stabilized spillway to minimize the potential for erosion of the spillway or basin embankment.

- k. Dewatering: The SWPPP shall require a description of any anticipated dewatering methods, including the anticipated volume of water to be discharged and the anticipated maximum flow discharged from these dewatering activities, expressed in gallons per minute. Maximum flow may be stated in the SWPPP as an estimate based on the type and capacity of equipment being used for dewatering. The SWPPP shall call for specific BMPs designed to treat water pumped from excavations and in no case shall this water be pumped off site without being treated by the specified BMPs.
- l. Roadways: Where applicable, upon installation of or connection to roadways, all efforts should be made to prevent the deposition of earth and sediment onto roadways through the use of proper BMPs. Where sediment is present on roadways all storm water curb inlets shall have inlet protection. Where storm water will flow off the end of where a roadway terminates, a sediment catching BMP (ex. gravel berm, silt fence, etc.) shall be provided. Roadways and curb inlets shall be cleaned weekly or following a rainfall that generates a run-off. Stabilized construction entrances shall be used to prevent sediment trackout.

11. Amending/Updating the SWPPP: The permittee shall amend and update the SWPPP as appropriate during the term of the land disturbance activity. The permittee shall amend the SWPPP, at a minimum, whenever the:
 - a. Design, operation, or maintenance of BMPs is changed;
 - b. Design of the construction project is changed that could significantly affect the quality of the storm water discharges;
 - c. Permittee's inspections indicate deficiencies in the SWPPP or any BMP;
 - d. MDNR notifies the permittee in writing of deficiencies in the SWPPP;
 - e. SWPPP is determined to be ineffective in significantly minimizing or controlling erosion and sedimentation (e.g., there is visual evidence, such as excessive site erosion or excessive sediment deposits in streams or lakes);
 - f. Total Settleable Solids from a storm water outfall exceed 2.5 mg/L/hr (or 0.5 mg/L/hr if discharged to a valuable resource water);
 - g. MDNR determines violations of Water Quality Standards may occur or have occurred.
12. Site Inspections Reports: Regularly scheduled inspections shall be at a minimum once per seven calendar days. These inspections shall be conducted by the person responsible for environmental matters at the site, or a person trained by and directly supervised by the person responsible for environmental matters at the site. For disturbed areas that have not been finally stabilized, all installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance. All storm water outfalls shall be inspected for evidence of erosion or sediment deposition. The receiving stream shall also be inspected for 50 feet downstream of the outfall. Any problems shall be noted in an inspection report and corrected within seven calendar days of the inspection. If a rainfall causes storm water runoff to occur on site, the BMPs must be inspected within a reasonable time period (not to exceed 48 hours). The SWPPP must explain how the person responsible for erosion control, will be notified when storm water runoff occurs. If weather conditions make it impossible to correct the problem within seven days, a detailed report of the problem (including pictures), must be filed with the regular inspection reports. The permittee shall correct BMP malfunctions as soon as weather conditions allow. Parts of the site that have been finally stabilized may be inspected once per month. (A once per month inspection schedule may be implemented for a site with interim stabilization if the permittee makes a written request for the schedule and it is approved by the Department.) A log of each inspection shall be kept. The inspection report is to include the following minimum information: inspector's name, date of inspection, observations relative to the effectiveness of the BMPs, actions taken or necessary to correct problems, and listing of areas where land disturbance operations have permanently or temporarily stopped. The inspection report shall be signed by the permittee or by the person performing the inspection if duly authorized to do so.
13. Proper Operation and Maintenance: The permittee shall at all times maintain all pollution control measures and systems in good order to achieve compliance with the terms of this general permit.
14. Public Notification: The permittee shall post a copy of the public notification sign described by the department on the information board at the main entrance to the site. The public notification sign must remain posted at the site until the site has been finally stabilized.

OTHER DISCHARGES

1. Hazardous Substance and Oil Spill Reporting: Refer to Section B, #14 of Part I of the Standard Conditions that accompany this permit.
2. Removed substances: Refer to Section B, #6 of Part I of the Standard Conditions that accompany this permit.
3. Change in discharge: In the event soil contamination or hazardous substances are discovered at the site during land disturbance activities, the permittee shall notify the MDNR regional office by telephone as soon as practicable and no later than 24 hours after discovery. The permittee must also notify the MDNR regional office in writing no later than 14 calendar days after discovery.

SAMPLING REQUIREMENTS AND EFFLUENT LIMITATIONS

1. Discharges shall not violate Water Quality Standards 10 CSR 20-7.031(3). Total Settable Solids shall not exceed a maximum of 2.5 ml/L/hr. for each storm water outfall. If there is a discharge to valuable resource waters, Total Settable Solids shall not exceed a maximum of 0.5 ml/L/hr.
2. There are no regular sampling requirements in this permit. However, the Department may require sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations, or other such evidence of off-site contamination from activities at the site. If such an action is needed, the Department will specify in writing any additional sampling requirements, including such information as location, extent, and parameters.

RECORDS

1. The permittee shall retain copies of this general permit, the SWPPP and all amendments for the site named in the State Operating Permit, results of any monitoring and analysis, and all site inspection records required by this general permit. The records shall be accessible during normal business hours. The records shall be retained for a period of at least three years from the date of the Letter of Termination.
2. The permittee shall provide a copy of the SWPPP to MDNR, USEPA, or any local agency or government representative if they request a copy in the performance of their official duties.
3. The permittee shall provide those who are responsible for installation, operation, or maintenance of any BMP a copy of the SWPPP.
4. The permittee, their representative, and/or the contractor(s) responsible for installation, operation, and maintenance of the BMPs shall have a current copy of the SWPPP with them when on the project site.

TERMINATION

This permit may be terminated upon the request of the applicant when all sites have been stabilized. A site is considered to be stabilized when either perennial vegetation, pavement, buildings, or structures using permanent materials cover all areas that have been disturbed. With respect to areas that have been vegetated, vegetative cover shall be at least 70% of fully established plant density over 100% of the disturbed area.

In order to terminate the permit, the permittee shall notify MDNR by submitting Form H,

included with the State Operating Permit. The permittee shall complete Form H and mail it to MDNR at the address noted in the cover letter of this permit.

This general permit will expire five years from the effective date of the permit (see page 1). The issue date is the date the State Operating Permit is issued to the applicant. The expiration date may or may not coincide with the date when the authorized project or development is scheduled for completion.

If the project or development completion date will be after the expiration date of this general permit, then the permittee must reapply to the department for the permit to be re-issued. The permittee will receive notification of the expiration date of the permit before the expiration date listed on page 1 of this permit. In order for the permit to be re-issued, the permittee should submit the appropriate application form(s) at least 180 days before the expiration of the permit if land disturbance activity is expected to continue past the expiration date of this general permit.

If the permittee does not apply for the renewal of this permit, this permit will automatically terminate on the expiration date. Continued discharges from a site that has not been fully stabilized are prohibited beyond the expiration date; unless the permit is reissued or the permittee has filed a timely application for the reissuance of this permit.

DUTY TO COMPLY

The permittee shall comply with all conditions of this general permit. Any noncompliance with this general permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6.200. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal.

MAILING ADDRESS